SERVICE MANUAL

STEREO TURNTABLE

SANYO

TP220

(EUROPE)

SPECIFICATIONS

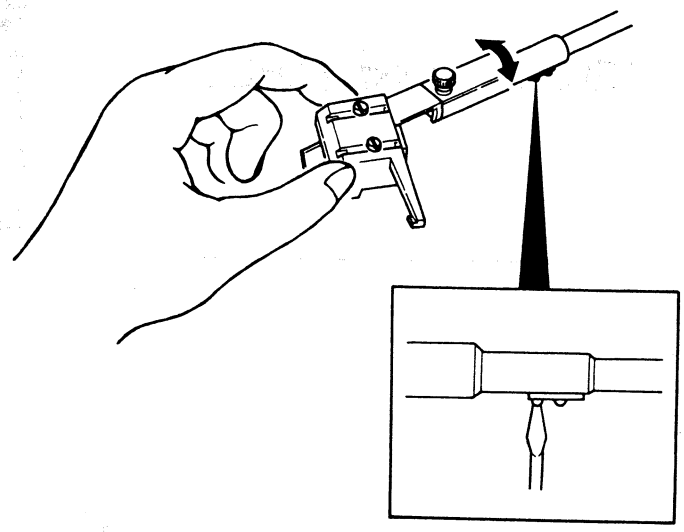
Motor	DC servo motor
Drive system	Belt drive
Speed	33-1/3 and 45 rpm
Wow and flutter	0.05% (WRMS)
Turntable platter	12" (304 mm)
Tone arm	Static-balance straight type
Tracking error	±1.5°
Overhang	19/32" (15 mm)
Cartridge and stylus	Magnetic stereo cartridge (VM type) (No. AT3601), 0.6 mil diamond stylus (No. ATN3601)
Stylus pressure	1.5 – 2.5 g.
Stylus pressure force range	0 – 3 g.
Frequency response	20 – 20,000 Hz
Channel separation	20 dB
Power source	AC: 220V, 50Hz
Power consumption	1.5W
Dimensions (Approx.) (TPB1)	16-13/16" x 13-3/8" x 3-15/16" 420(W) x 340(D) x 100(H) mm
Weight (Approx.) (TPB1)	5 lbs. 12 oz. (2.6 kg.)

*Specifications subject to change without notice.

ADJUSTMENT OF HEADSHELL

The headshell attached to the tonearm should not be inclined either to the right or to the left. If necessary, loosen the two screws on the bottom of the tubular arm and adjust the headshell. Be sure that the stylus is normal to the record surface.

NOTE: Do not take out these screws.

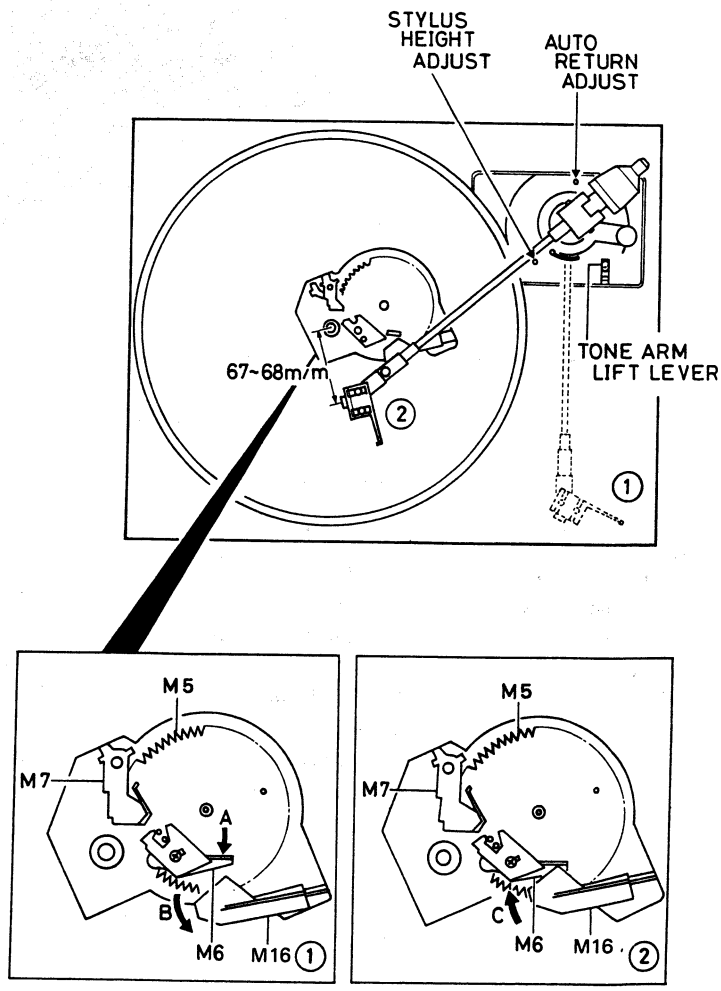


ADJUSTMENT OF AUTO-RETURN

Remove the turntable, and place the tonearm in the reset position (1). In this state, move the gear M5 so that the end of lever M7 may be seated in the recess of cam of main gear M5. Push lower trip lever M6 and trip lever M16 in the direction of arrow A and arrow B, respectively.

Insert a screwdriver into the hole for "auto return adjust" and turn it right or left until the end of trip lever M16 starts to hit against the lower trip lever M6 (arrow C) when the distance between the center shaft of turntable and stylus becomes 67 to 68 mm by moving the tonearm.

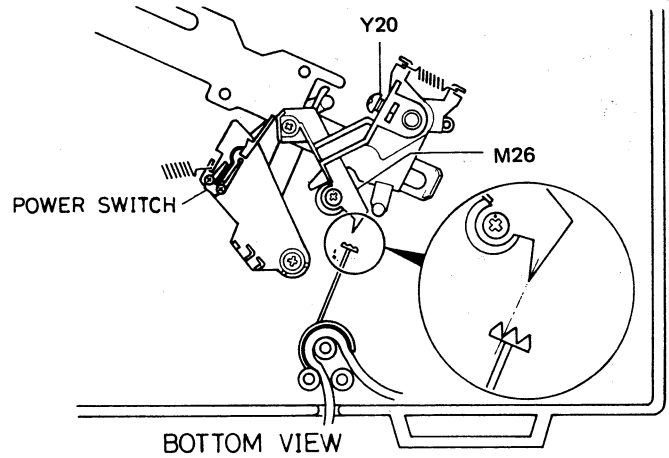
Put on the turntable, and check the auto-return performance.



ADJUSTMENT

ADJUSTMENT OF MICROSWITCH

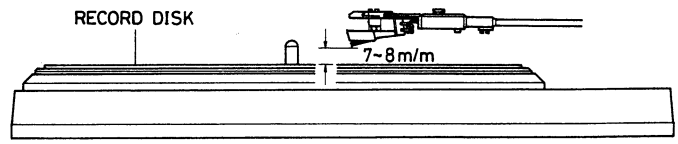
Determine the position with screw Y20 so that the end of arm lever M26 may coincide with the notch of the rib in the bottom of deck panel when the tonearm is set in the reset position (see expanded view).



ADJUSTMENT OF STYLUS HEIGHT

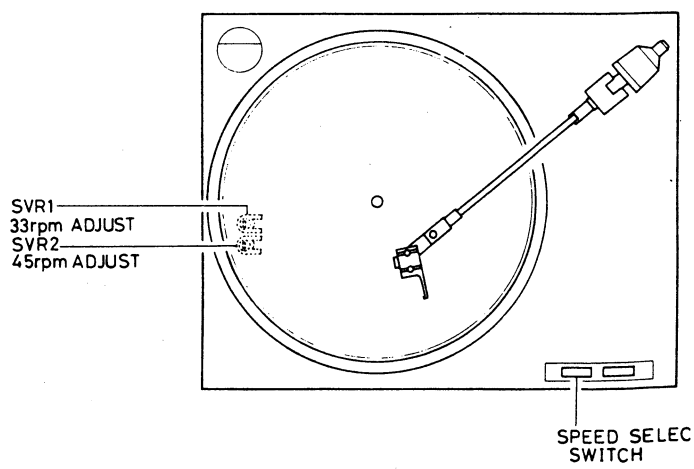
Setting the record disk in place, raise the tonearm lift lever.

Bring the tonearm to above the disk, and insert a screw-driver into the "stylus height adjust" hole (see drawing for ADJUSTMENT OF AUTO-RETURN) and turn it right or left until the distance between the disk and stylus becomes 7 to 8 mm.

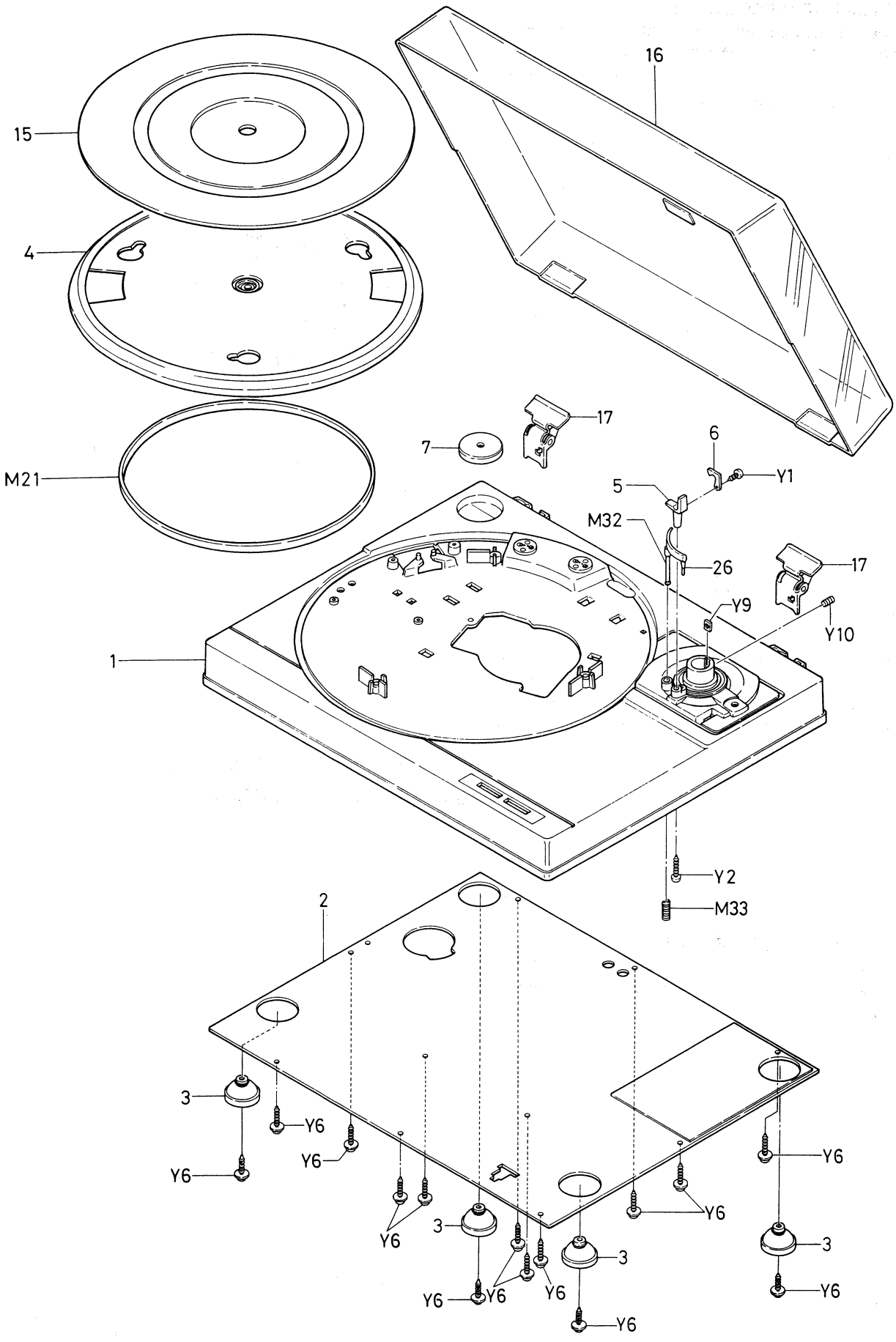


ADJUSTMENT OF TURNTABLE SPEED

Play a wow flutter checking record, and adjust by turning SVR1 (33 rpm) and SVR2 (45 rpm) so as to obtain the specified frequency.



CARINET EXPLODED VIEW

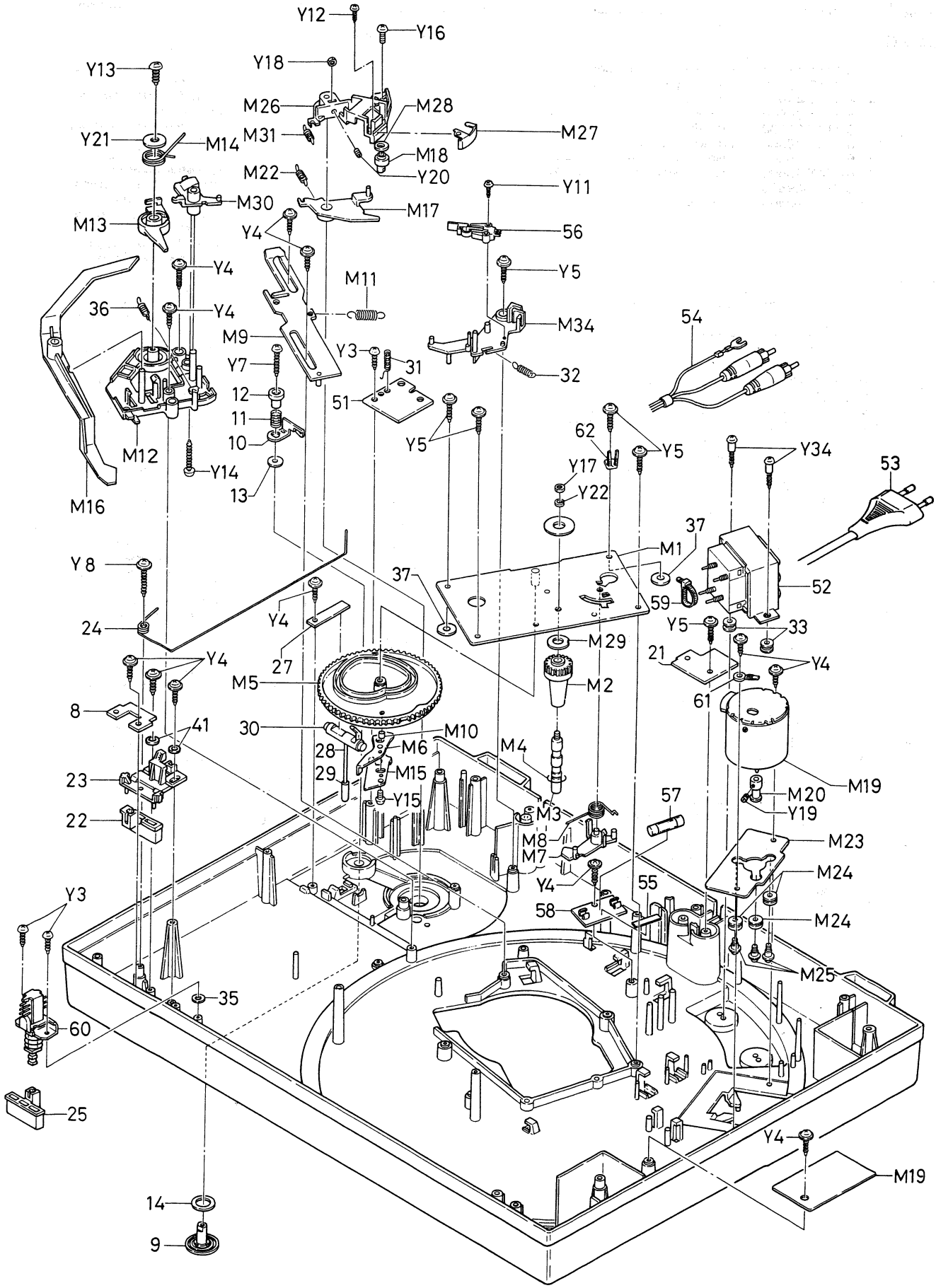


PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-231T-15250	Inner Polye Cover, Cord	1
	141-6-231T-10100	Inner Polye Cover, Accessory	1
	141-6-317T-43900	Pad, Top	1
	141-6-231T-35400	Inner Polye Cover, Inst Manual	1
	141-6-410T-95700	Inst. Manual	1
	141-6-133T-48300	Individual Carton	1
	141-6-144T-76600	Foam Plastic Case, Left Side	1
	141-6-144T-76500	Foam Plastic Case, Right Side	1
	141-6-317T-69500	Pad	1
	141-6-235T-60500	Inner Polye Laminate Cover	1
CABINET			
1	141-0-121T-19101	Deck Panel Ass'y	1
2	141-2-125T-32400	Bottom Lid	1
3	141-2-174T-13800	Stand	4
4	141-2-118T-02700	Turn Table	1
5	141-2-873T-00900	Rest, Arm Fixed	1
6	141-2-873T-00700	Rest, Arm Movable	1
7	141-2-352T-52500	Spacer, 45 Adaptor	1
8	141-2-465T-20000	Stopper, Reject Button	1
9	141-2-163T-85100	Rotary Knob, Antiskating	1
10	141-2-742T-67300	Lever, Antiskating	1
11	141-2-855T-86000	Spring Coil, Antiskating	1
12	141-2-683T-26300	Ring, Antiskating	1
13	141-2-453T-30901	Washer, GNW 7.2x11x0.5mm	1
14	141-2-246T-95400	Sheet, Antiskating	1
15	141-2-247T-09601	Sheet, Rubber	1
16	141-0-194T-01700	Dust Cover Ass'y	1
17	141-2-251T-07200	Hinge	2
CHASSIS			
21	141-2-453T-70000	Washer, AC Cord Fixer	1
22	141-2-161T-93700	Push Button, Reject,	1
23	141-2-210T-31500	Bracket, Reject	1
24	141-2-852T-70000	Spring Wire, Reject	1
25	141-2-161T-93700	Push Button, 33/45 Select	1
26	141-2-872T-00701	Lifter, Arm	1
27	141-2-853T-71500	Spring Plate, Lift	1
28	141-2-742T-67100	Lever, Lift	1
29	141-2-156T-30400	Cup Knob, Lift	1
30	141-2-671T-06300	Cam, Lift	1
31	141-2-855T-82000	Spring Coil, Relay PCB	1
32	141-2-855T-84600	Spring Coil, Micro Switch	1
33	141-2-445T-05000	Rubber Cushion, PT Mtg.	2
34	141-2-421T-33700	Special Screw, PT Mtg.	2
35	141-2-453T-02001	Washer, 3x8x0.3mm, Fiber Speed Button	2
36	141-2-855T-87500	Spring Coil, Cue Lever Return	1
37	141-2-453T-30701	Washer, GNW 5.2x8x0.25mm	2
38	141-2-453T-33400	Washer, GNW 3.1x4.4x0.25mm	2

Ref. No.	Part No.	Description	Q'ty
HARD WARE			
Y 1		Screw, Pan Hd. Tapping, 2.6x6mm	1
Y 2		Screw, Pan Hd. Tapping, 2.6x12mm	1
Y 3		Screw, Pan Hd. Tapping, 3x8mm	1
Y 4		Screw, Pan Hd. Tapping, w/washer 3x8mm	12
Y 5		Screw, Pan Hd. Tapping, w/washer 3x10mm	6
Y 6		Screw, Pan Hd. Tapping, w/washer 3x12mm	14
Y 7		Screw, Pan Hd. Tapping, w/washer 3x14mm	1
Y 8		Screw, Pan Hd. Tapping, w/washer 3x16mm	1
Y 9		Nut, Square 4mm	1
Y10		Screw, Hexagon Socket Set, 4x6mm	1
Y11		Screw, Pan Hd. Tapping, 2x10mm	1
Y12		Screw, Pan Hd. Tapping, 2.6x4mm	1
Y13		Screw, Pan Hd. Tapping, 3x8mm	1
Y14		Screw, Pan Hd. Tapping, 3x18mm	1
Y15		Screw, Pan Hd. Tapping w/washer 2.6x8mm	1
Y16		Screw, Binding Hd. Self-tapping 3x6mm	1
Y17		Nut, Regular Hexagon 1, 4mm	1
Y18		Nut, Regular Hexagon 3, 4mm	1
Y19		Screw, Headless, 2x3mm	1
Y20		Screw, Headless Hexagon Hole 4x6mm	1
Y21		Washer, 3x13x1mm	1
Y22		Washer, Spring, 4mm	1
ELECTRICAL PARTS			
51	4-280T-09700	P.C.Board, Output	1
52	4-300T-70000	Power Transformer	1
53	4-243T-84971	Power Supply Cord	1
54	4-243T-20800	Lead Cord	1
55	141-6-479T-44000	Label, Fuse Holder	1
56	4-231T-82900	Switch, SW2, Power	1
57	4-234T-01771	Fuse, 400mA	1
58	141-2-383T-07600	Fuse Holder	1
59	141-2-464T-20600	Fixer	2
60	4-238T-39200	Switch, SW1, 33/45 rpm Select	1
61	141-2-472T-05700	Lug,	1
62	141-2-382T-07000	Terminal	1

MECHANISM EXPLODED VIEW

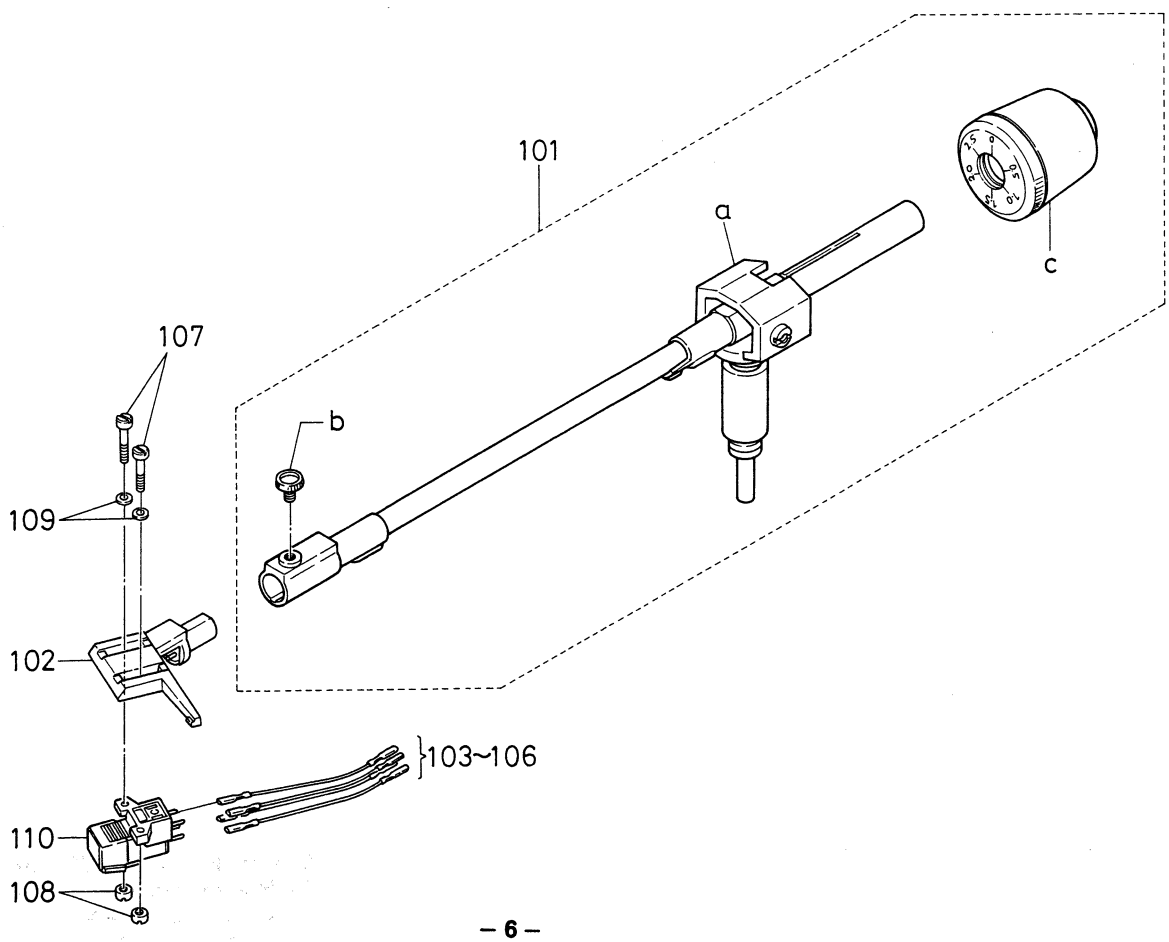


PARTS LIST

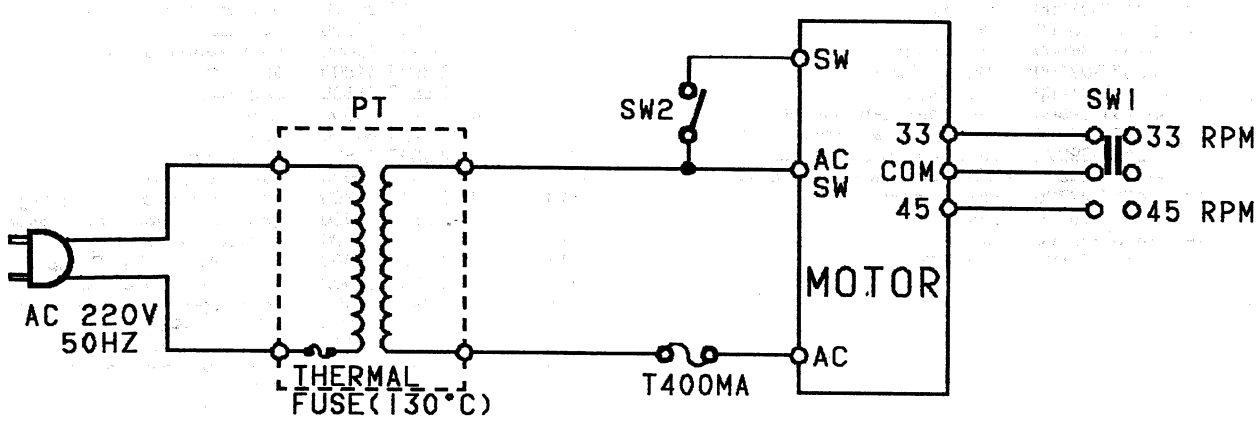
Ref. No.	Part No.	Description	Q'ty
ARM			
101	141-0-743T-08800	Arm Ass'y	1
a	141-2-743T-08800	Arm	1
b	141-2-155T-06500	Ring Knob	1
c	141-0-687T-03100	Weight Ass'y	1
102	141-2-286T-01400	Head Shell	1
103	4-243T-29900	Lead Cord, Left Hot side	1
104	4-243T-29971	Lead Cord, Left Ground side	1
105	4-243T-29972	Lead Cord, Right Hot side	1
106	4-243T-29973	Lead Cord, Right Ground side	1
107	141-2-421T-23705	Special Screw	2
108	141-2-417T-18100	Stud Nut	2
109	141-2-453T-32200	Washer	2
110	4-157T-03801	Cartridge Ass'y	1

Ref. No.	Part No.	Description	Q'ty
MECHANISM			
M 1	141-0-351T-54800	Bracket Mounting Ass'y	1
M 2	141-0-461T-47900	Pipe Ass'y	1
M 3	141-2-754T-49000	Shaft, Center Spindle	1
M 4	141-2-852T-64600	Spring Wire	1
M 5	141-2-581T-21600	Gear, Main	1
M 6	141-2-742T-68600	Lever	1
M 7	141-2-742T-68700	Lever	1
M 8	141-2-852T-70501	Spring Wire	1
M 9	141-0-731T-92600	Slide Ass'y, Main	1
M10	141-2-461T-42800	Pipe, Engagement Lever Mtg.	1
M11	141-2-856T-12400	Spring Coil, Main Slide Tension	1
M12	141-2-210T-32700	Bracket, Lift Up Mtg.	1
M13	141-2-742T-68400	Lever, Manual Cue Dump.	1
M14	141-2-852T-70600	Spring Wire, Lever (M13)	1
M15	141-2-742T-68500	Lever, Engagement Lever Mtg.	1
M16	141-2-742T-87500	Lever, Trip Lever	1
M17	141-2-742T-69200	Lever, Arm Lever	1
M18	141-2-754T-06800	Shaft, Auto Return Adjust	1
M19	4-527T-22300	Motor	1
M20	141-2-661T-76700	Pulley, Motor	1
M21	141-2-561T-05600	Flat Belt, Turn Table Drive	1
M22	141-2-855T-52700	Spring Coil, Cancelar	1
M23	141-2-378T-11500	Bracket, Motor Mtg.	1
M24	141-2-447T-38600	Cushion, Motor Mtg.	3
M25	141-2-421T-27300	Special Screw, Motor Mtg.	3
M26	141-2-742T-69101	Lever, Arm	1
M27	141-2-352T-64100	Spacer, Switch Operation	1
M28	141-2-453T-33700	Washer, GNW 4.5x7x0.25mm	1
M29	141-2-457T-44100	Special Washer, Turn Table	1
M30	141-2-742T-68800	Lever, Cue	1
M31	141-2-855T-51600	Spring Coil, Return Lever Return	1
M32	141-2-754T-06700	Shaft, Cue Piston	1
M33	141-2-855T-81600	Spring Coil, Lift Spring	1
M34	141-2-742T-68901	Lever, Switch	1

ARM EXPLODED VIEW



SCHEMATIC DIAGRAM



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